

## ABSTRACT

A chaos spreading code  $c(n)$  is inputted to a spreading unit 32. Data D1 and  $c(n)$  are multiplied in the spreading unit 32. A chaos spreading code  $d(n)$  is inputted to a spreading unit 42. Data D2 and  $d(n)$  are multiplied in the spreading unit 42. The chaos spreading codes  $c(n)$  and  $d(n)$  orthogonally cross each other. Outputs of the spreading units 32 and 42 are added by an adder 35 and transmitted through a transmitting unit 36 to a transmission path 38. By making an initial value which is set in a chaos sequence generator having a construction of a digital circuit different, the chaos spreading codes which orthogonally cross can be formed. Since the chaos spreading codes  $c(n)$  and  $d(n)$  orthogonally cross, an orthogonal modulating unit having a construction of an analog circuit for amplitude-modulating carriers which orthogonally cross can be made unnecessary and the construction can be simplified.